

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated July 26, 2004 (U.S. Patent Office Paper No. 4). In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, Claims 1 and 2 are being canceled without prejudice or disclaimer, while Claims 3 through 17 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. In addition, new Claim 18 is hereby submitted for consideration.

Additional Amendments

The specification and drawings are being amended to correct formal errors and to better disclose and describe the features of the present invention as claimed.

Formal Objections or Rejections

Claim 2 was objected to for an informality of a period “.” being absent at the end of Claim 2. As noted previously, Claim 2 has been cancelled without prejudice or disclaimer. Therefore, withdrawal of the objection to Claim 2 is respectfully requested.

Prior Art Rejections

Claims 1, 11 through 15 and 16 were rejected under 35 U.S.C. § 102(a) over U.S. Patent No. 6,057,987 to Camp, Jr. et al. (the Camp '987 patent) This rejection is respectfully traversed.

Claims 2 and 6 were rejected under 35 U.S.C. § 103(a) over the Camp '987 patent in view of U.S. Patent No. 6,683,568 to James et al. (the James '568 patent) This rejection is respectfully traversed.

Claims 3 through 5 and 7 through 9 were rejected under 35 U.S.C. § 103(a) over the Camp '987 patent in view of U.S. Patent No. 6,369,756 to Wang et al. (the Wang '756 patent). This rejection is respectfully traversed.

Claim 10 was rejected under 35 U.S.C. § 103(a) over the Camp '987 patent in view of U.S. Patent No. 5,614,914 to Bogliano et al. (the Bogliano '914 patent). This rejection is respectfully traversed.

Claim 17 was rejected under 35 U.S.C. § 103(a) over the Camp '987 patent in view of U.S. Patent No. 6,405,213 to Layson et al. (the Layson '213 patent). This rejection is respectfully traversed.

The above rejections of Claims 1 through 17 will be considered collectively.

It is respectfully submitted that the Camp '987 patent, the James '568 patent, the Wang '756 patent, the Bogliano '914 patent, and the Layson '213 patent do not disclose:

a location calculation method including a step of estimating, according to the result of the measurement of the reception timing of signals obtained, an erroneous result of measurement, wherein the step includes estimating, according to a result of a determination of distance measurement whether or not a triangle is formed, using an estimated distance between the mobile terminal and the standard base station, an estimated distance between the mobile terminal and a base station used as an object of the estimation, and a distance between

the standard base station and the base station used as the object of the estimation, wherein the result of the determination of distance measurement for the base station used as the object of the estimation not satisfying the triangle forming condition is an erroneous result of measurement, as respectively recited in independent Claim 3;

a calculation method including a step of estimating, according to the result of the measurement of the reception timing of signals, an erroneous result of measurement, wherein the step of estimating includes selecting, as base stations constituting two sectors of a same wireless facility, a first base station and a second base station existing within a predetermined angle by using the direction of the base station from the mobile terminal, obtaining a difference between a first distance between the mobile terminal and the first base station and a second distance between the mobile terminal and the second base station, comparing the difference obtained with a predetermined threshold value, and determining the result of the difference obtained between the first distance and the second distance as an erroneous result of measurement when the difference obtained between the first distance and the second distance is more than the predetermined threshold value according to a result of the comparison, as respectively recited in independent Claim 7;

a location calculation apparatus including erroneous measurement estimating means for estimating, according to the result of measurement of the reception timing of signals measured by the reception timing measuring means, an erroneous result of measurement, the erroneous measurement estimating means for estimating, according to a result of a determination of distance measurement whether or not a triangle is formed, using an estimated distance between the mobile terminal and a standard base station, an estimated distance between the mobile terminal and a base station used as an object of the estimation, and a distance between the standard base station and the base station used as the object of the estimation, wherein the result of the determination of distance measurement for the base

station used as the object of the estimation not satisfying the triangle forming condition is an erroneous result of measurement, as respectively recited in independent Claim 11;

a software product for executing, by a computer, a location calculation method including a step of estimating, according to the result of measurement of the reception timing of signals obtained, an erroneous result of measurement, wherein the step includes estimating, according to a result of a determination of distance measurement whether or not a triangle is formed, using an estimated distance between the mobile terminal and a standard base station, an estimated distance between the mobile terminal and a base station used as an object of the estimation, and a distance between the standard base station and the base station used as the object of the estimation, wherein the result of the determination of distance measurement for the base station used as the object of the estimation not satisfying the triangle forming condition is an erroneous result of measurement, as respectively recited in independent Claim 12;

a control apparatus wherein the memory has stored a program for executing by the CPU a step of estimating, according to the result of measurement of the reception timing of signals obtained, an erroneous result of measurement, wherein the step includes estimating, according to a result of a determination of distance measurement whether or not a triangle is formed, using an estimated distance between the mobile terminal and a standard base station, an estimated distance between the mobile terminal and a base station used as an object of the estimation, and distance between the standard base station and the base station used as the object of the estimation, wherein the result of the determination of distance measurement for the base station used as the object of the estimation not satisfying the triangle forming condition is an erroneous result of measurement, as respectively recited in independent Claim 16; and

a location calculation method including a first step of measuring reception timing of signals transmitted between a base station of the plurality of base stations and the

mobile terminal to obtain a first distance between the base station of the plurality of base stations and the mobile terminal; and including a second step of determining an incorrect distance to be removed, including the sub-steps of:

(A) selecting a standard base station from the plurality of base stations;

(B) obtaining both a second distance between the base station of the plurality of base stations and the standard base station, and a third distance between the standard base station and the mobile terminal; and

(C) determining whether the first distance, the second distance and third distance form a triangle, whereby an incorrect distance is determined when the first distance, the second distance and the third distance do not form a triangle, thus finding an incorrect distance in the first, second and third distances in accordance with the amounts of the first, second and third distances, as respectively recited in new independent Claim 18.

In particular, the above recited features of independent Claims 3, 7, 11, 12, 16 and 18 are not disclosed by the Camp '987 patent. It is respectfully submitted that the Office Action recognizes that the Camp '987 patent does not specifically disclose a step, according to a result of a determination, whether or not a triangle is formed using distances, whereby not satisfying the triangle forming condition is an erroneous result of measurement. (See Paper No. 4, page 5, second paragraph.).

Therefore, the Camp '987 patent does not disclose a step of or means for determining, according to the result of the measurement of the reception timing of signals obtained, an erroneous result of measurement, whereby according to a result of a determination of distance measurement it is determined whether or not a triangle is formed, as respectively recited in independent Claims 3, 11, 12, 16, and 18.

Further, the Office Action indicates (by reference to the Wang '756 patent) that the Camp '987 patent does not disclose determining an erroneous result of measurement by

selecting base stations existing within a predetermined angle and obtaining a difference between distance measurements and comparing the difference with a predetermined threshold value. (See Paper No. 4, page 6, second full paragraph.)

Therefore, the Camp '987 patent does not disclose obtaining a difference between a first distance between the mobile terminal and the first base station and a second distance between the mobile terminal and the second base station, comparing the difference obtained with a predetermined threshold value, and determining the result of the difference obtained between the first distance and the second distance as an erroneous result of measurement when the difference obtained between the first distance and the second distance is more than the predetermined threshold value according to a result of the comparison, as respectively recited in independent Claim 7.

Moreover, the above recited features of independent Claims 3, 7, 11, 12 16 and 18 are likewise not disclosed by the Wang '756 patent.

In particular, the Wang '756 patent discloses a determination regarding which method should be selected, either a broadcast method or an antenna array beamforming method, when a transmission in relation to a communication unit 110 is to be performed. The Wang '756 patent discloses the determination is based upon an estimated geographical direction (See Col. 7, lines 48-63 of the Wang '756 patent) and a determined geographical direction, with the communication unit 110 determining its own position based upon satellite signals and in accordance with techniques of triangulation (See Col. 5, lines 48-60 of the Wang '756 patent).

However, the Wang '756 patent does not disclose a step of or means for determining, according to the result of the measurement of the reception timing of signals obtained, an erroneous result of measurement, whereby according to a result of a determination of distance

measurement it is determined whether or not a triangle is formed, as respectively recited in independent Claims 3, 11, 12, 16, and 18.

Further, the above mentioned disclosure of the Wang '756 patent does not disclose obtaining a difference between a first distance between the mobile terminal and the first base station and a second distance between the mobile terminal and the second base station, comparing the difference obtained with a predetermined threshold value, and determining the result of the difference obtained between the first distance and the second distance as an erroneous result of measurement when the difference obtained between the first distance and the second distance is more than the predetermined threshold value according to a result of the comparison, as respectively recited in independent Claim 7.

Also, it is respectfully submitted that the remaining cited and applied references of the James '568 patent, the Bogliano '914 patent and the Layson '213 patent do not disclose the above mentioned features of Claims 3, 7, 11, 12, 16, and 18 in relation to determining an erroneous result of measurement.

Therefore, in view of the foregoing, independent Claims 3, 7, 11, 12, 16, and 18 are not anticipated by or obvious over the Camp '987 patent, the James '568 patent, the Wang '756 patent, the Bogliano '914 patent, and the Layson '213 patent. Dependent Claims 4 through 6, 8 through 10, 13 through 15 and 17 are at least allowable for the same reasons that the independent claims from which they respectively depend are allowable. Also, as noted previously Claims 1 and 2 have been cancelled without prejudice or disclaimer of their subject matter.

Withdrawal of the above identified rejections of Claims 1 through 17 under 35 U.S.C. § 102(a) and 35 U.S.C. § 103(a) is respectfully requested.

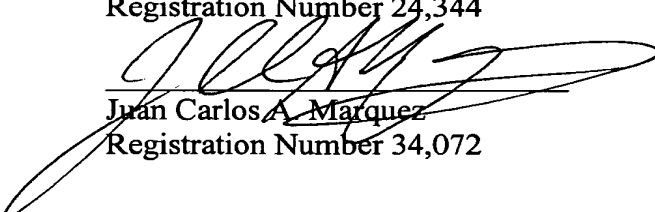
Reconsideration and allowance of Claims 3 through 17, and consideration and allowance of new Claim 18, are respectfully requested.

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344



Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200
October 26, 2004